

Course Name	Faculty Qualifications Needed	Related Disciplines	Acceptable Alternative Qualifications
MEEN 3100 Materials Processing	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Materials Science and Engineering, Metallurgical Engineering	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or materials science and engineering, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
MEEN 3210 Mechanism Design	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Robotics and Mechatronics, Computational Mechanics	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or robotics and mechatronics, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
MEEN 3220 Design of Machine Elements	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Robotics and Mechatronics, Computational Mechanics, Material Science and Engineering	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or robotics and mechatronics, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
MEEN 3250 Computer Aided Design	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Computational Mechatronics, Robotics and Mechatronics, Manufacturing and Design Engineering	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or computational mechatronics, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
MEEN 3511 Measurements and Instrumentation Laboratory	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Robotics and Mechatronics, Applied Physics, Electrocal and Computer Engineering	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or robotics and mechatronics, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
MEEN 3521 Manufacturing Processes Laboratory	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Robotics and Automation, Industrial Engineering, Materials Science and Engineering	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or robotics and automation, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.

MEEN 4011 Mechatronics Laboratory	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Robotics and Mechatronics, Electrical and Computer Engineering, Industrial Automation and Control	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or robotics and mechatronics, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
MEEN 4021 Thermal Fluid Systems Laboratory	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Aerospace Engineering, Chemical Engieeering	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or aerospace engineering, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
MEEN 4100 Modeling, Simulation and Automatic Controls	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Electrical Engineering, Systems and Control Engineering, Computational and Applied Mathematics	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or electrical engineering, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
MEEN 4120 Mechanical Metallurgy	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Metallurgical Engineering, Materials Science and Engineering, Industrial Engineering	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or metallurgical engineering, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
MEEN 4150 Heat Transfer	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Energy and Thermal Engineering, Aerospace Engineering, Chemical Engineering	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or energy and thermal engineering, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
MEEN 4200 Heating and Air Conditioning	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Energy and Systems Engineering, Building Systems Engineering	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or energy and systems engineering, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.

MEEN 4230 Machine Design	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Robotics and Mechatronics Engineering, Manufacturing and Design Engineering, Materials Sciece and Engineering	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or robotics and mechatronics, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
MEEN 4250 Thermal Fluid Systems Design	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Aerospace Engineering, Energy Engineering, Chemical Engieering	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or aerospace engineering, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
MEEN 4300 Mechanical Energy Conversion	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Aerospace Engineering, Energy Engineering, Chemical Engieering	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or aerospace engineering, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
MEEN 4400 Manufacturing Engineering	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Industrial Engineering, Materials Science and Engineering	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or industrial engineering, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
MEEN 4600 Fluid Dynamics	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Applied Physics, Aerospace Engineering	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or applied physics, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
MEEN 4700 Mechanical Vibration	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Aerospace Engineering and Civil Engineering	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or aerospace engineering, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.

MEEN 4800 Advanced Machine Design	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Robotics Engineering, Systems Engineering	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or robotics engineering, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
ASTR 1010 Astronomy I	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Astronomy, Astrophysics, Physcis	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or astronomy, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
ASTR 1020 Astronomy II	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Astronomy, Astrophysics, Physcis	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or astronomy, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
ASTR 3010 Observational Astronomy	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Astronomy, Astrophysics, Physcis	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or astronomy, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
ASTR 3330 Astrophysics	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Astronomy, Astrophysics, Physcis	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or astronomy, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
ASTR 3800 Astronomy Seminar	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Astronomy, Astrophysics, Physcis	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or astronomy, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.

ASTR 4900 Research in Astronomy	Earned Masters or Doctorate degree in Mechanical and Manufacturing Engineering in the teaching discipline; or Masters or Doctorate degree with a concentration in the teaching discipline with at least 18 graduate semester hours in Mechanical and Manufacturing Engineering.	Astronomy, Astrophysics, Phycis	Acceptable alternative qualifications include substantial professional experience (e.g., publications, awards) in mechanical and manufacturing engineering or astronomy, relevant professional licensure/certifications, and notable scholarly work such as published articles or conference presentations in mechanical and manufacturing engineering related fields.
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